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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Mooi Choo Chuah

Chuah 57-15

6092

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EXAMINER

NGUYEN, JOSEPH D

ART UNIT

PAPER NUMBER.

2683

8

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,399

Applicant(s)

CHUAH ET AL.

Examiner

Joseph D Nguyen

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 7, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (6,473,411) in view of Dolan (6,628,632).

Regarding claim 1, Kumaki et al. discloses a method of switching (handoff) between a previous base station (base station 202) and a new base station (base station 203) in a wireless communications system having a shared downlink data channel downlink data from the wireless communications system to at least one wireless unit (fig. 12-14, col. 21 line 53 thru col. 22 line 46), said method comprising the steps of:

a) sending signals from the wireless unit (mobile terminal notifying handoff) to said wireless communications system via an uplink control channel associated with the shared downlink data channel (fig. 12-14, and 24-25, col. 22 lines 21-33, and col. 47 lines 35-48), wherein the signals indicate an identity of said new base station that the wireless unit has selected from which to receive downlink data (col. 22 lines 21-53, and col. 33 lines 9 thru col. 34 line 65);

b) waiting for an indication from the wireless communication system to switch to said new base station (col. 22 lines 34-45).

c) receiving downlink data from said previous base station via the shared downlink data channel until said indication (col. 19 lines 56-67); and

d) switching to said new base station in response to said indication to switch to said new base station (col. 22 lines 39-46).

However, Kumaki et al. does not specifically disclose waiting for an indication from the wireless communication system to switch to said new base station.

Dolan teaches waiting for an indication from the wireless communication system to switch to said new base station (fig. 3 col. 6 line 1 thru col. 7 line 5). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Kumaki et al. system with the teaching of the Dolan of waiting for an indication from the wireless communication system to switch to said new base station in order to avoid the data lost in the downlink after handover.

Regarding claim 4, Kumaki et al. further discloses a method as claimed in claim 1 wherein said step of receiving comprises the step of: receiving downlink data from said previous base station via the shared downlink data channel until an indication from said previous base station that data for said wireless unit at said previous base station has been sent (fig. 29, col. 47 lines 3-34). However, Kumaki et al. does not specifically disclose an indication from said previous base station that data for said wireless unit at said previous base station has been sent. But it would have been obvious to one ordinary skilled in the art that the Kumaki et al. system of continue receiving the data

Art Unit: 2683

until the handoff completion indicating to the mobile station to switch over to new base station to receive the new data, which means, the data has to be sent from the previous base station is completed before the switching can carry out to avoid data lost.

Regarding claim 5, Kumaki et al. further discloses a method as claimed in claim 1. Wherein said step of receiving comprises the step of: receiving downlink data from said previous base station via the shared downlink data channel until receiving a notification from said previous base station that data is being forwarded to said new base station (col. 19 lines 56-67, and col. 22 lines 34-46).

Regarding claim 7, Kumaki et al. further discloses a method as claimed in claim 1, wherein said step of sending comprises the step of sending base station identification information on the uplink control channel associated with the shared downlink data channel carrying said downlink data to said wireless unit (fig. 21-24, col. 72 lines 38-53).

Regarding claim 12, Kumaki et al. further discloses a method as claimed in claim 1, wherein the indication is conducted repeatedly until the switching step is conducted (col. 20 lines 24-42). However, Kumaki et al. does not specifically disclose indication is conducted repeatedly. But it would have been obvious to one ordinary skilled in the art that the process of switching has to be repeatedly conducted until the handoff is completed in order to the mobile station to receive the data from the new base station when it moves to the new base station and when the signal strength is degraded its quality.

Regarding claim 13, Kumaki et al. further discloses a method as claimed in claim 1, wherein said step of sending comprises broadcasting said signals via said uplink

Art Unit: 2683

control channel (col. 15 line 50 thru col. 16 line 2), which is a broadcast channel capable of being received by a plurality of base stations (point-to-multipoint) (col. 15 lines 33-40).

Regarding claim 14, Kumaki et al. further discloses a method as claimed in claim 13, wherein the wireless unit notifies the previous base station regarding the switching (handoff) to the new base station via the broadcast channel (col. 46 lines 10-23).

Regarding claim 15, Kumaki et al. further discloses a method as claimed in claim 11, wherein the wireless unit notifies the new base station regarding the switching (handoff) to the new base station via the broadcast channel (col. 46 lines 10-23).

3. Claims 3, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (6,473,411) in view of Dolan (6,628,632), and further in view of Padovani et al. (6,574,211).

Regarding claim 3, in the modified Kumaki et al. system, Kumaki et al. further discloses a method as claimed in claim 1 wherein said step of sending comprises the step of: sending signals indicating the identity of said new base station (col. 22 lines 21-24); and sending downlink data packet on said uplink control channel to said previous base station (fig. 23). However, Kumaki et al. does not specifically disclose sending downlink data rate information.

Padovani et al. teaches sending downlink data rate information (abstract, col. 14 lines 21-61). Therefore, it would have been obvious to one ordinary skilled in the art at

Art Unit: 2683

the time the invention was made to modify the Kumaki et al. system with the teaching of Padovani et al. of sending data rate information in order to select the new base station for sending and receiving the data information at the appropriate rate from the serving base station.

Regarding claim 8, in the modify Kumaki et al. system, Kumaki et al. further discloses a method as claimed in claim 7 wherein said step of sending comprises the step of sending said base station identification information and downlink data rate information on said uplink control channel (fig. 52, col. 72 lines 38-65). However, Kumaki et al. does not specifically disclose sending the data rate information.

Padovani et al. teaches sending downlink data rate information (abstract, col. 14 lines 21-61). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Kumaki et al. system with the teaching of Padovani et al. of sending data rate information in order to select the new base station for sending and receiving the data information at the appropriate rate from the serving base station.

Regarding claim 9, in the modify Kumaki et al. system, Kumaki et al. further discloses a method as claimed in claim 1, wherein the signals sent via the uplink control channel identifying the new base station (15 lines 11-67). However, Kumaki et al. does not specifically disclose the signals sent comprise a Walsh code, and wherein the sending step comprises spreading the signals in the uplink control channel such that only the new base station receives the signals from the wireless unit.

Art Unit: 2683

Padovani et al. teaches the signals sent comprise a Walsh code (col. 14 lines 54-61), and wherein the sending step comprises spreading the signals (col. 31 lines 54-65) in the uplink control channel such that only the new base station receives the signals from the wireless unit. Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Kumaki et al. system with the teaching of Padovani et al. of sending signals with Walsh code and spreading the signal in order to the new base station is able to identify the mobile station that will receive the data.

4. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (6,473,411) in view of Dolan (6,628,632), and further in view of Forssell et al. (EP 1059 820 A2).

Regarding claim 10, in the modify Kumaki et al. system, Kumaki et al. further discloses a method as claimed in claim 1. However, Kumaki et al does not specifically discloses wherein the indication comprises an indication message that is sent to the previous base station indicating that data packets are ready to be sent to the new base station.

Forssell et al. teaches wherein the indication comprises an indication message that is sent to the previous base station indicating that data packets are ready to be sent to the new base station (col. 14 lines 39-56). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Kumaki et al. with the teaching of the Forssell et al. of the indicating message is sent to the

Art Unit: 2683

previous base station in order to the mobile station to switch over to the new base station and to receive the remaining data after handoff.

Regarding claim 11, Forssell et al. further discloses a method as claimed in claim 10, wherein the indication message is an end of data signal indicating that the receiving step has received all data from the previous base station (col. 14 lines 39-56).

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-5, and 7-15 have been considered but are moot in view of the new ground(s) of rejection.

6. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

703 308-9051, (for formal communication intended for entry)

Or:

(703) 305-9509 (for informal or draft communications, please label
"PROPOSED" OR "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA. Sixth floor (Receptionist).

Art Unit: 2683

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D Nguyen whose telephone number is (703) 605-1301. The examiner can normally be reached on 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703) 308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Joseph Nguyen



Jul. 7, 2004



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600